AMENDMENTS TO THE CLAIMS

Please cancel claims 1-18 and 20-32. Please add new claim 33.

1.-18. (Cancelled)

19. (Previously Presented)   In a system comprising a host computer containing a plurality of virtual servers which support a private network address space wherein the private network address spaces of two or more of the virtual servers overlap, a method for providing private network services using private addresses in a location remote from private network users, the method comprising:

   storing a customer lookup table, the customer lookup table storing associations
     between physical interfaces and tunnel identifiers identifying tunnels for
     private networks and a plurality of customer forwarding tables;
   storing a plurality of customer forwarding tables, the customer forwarding tables
     associating network addresses with physical interfaces and tunnel identifiers;
   receiving, over a tunnel, a transmission on a physical interface, the transmission
     containing a tunnel identifier;
   determining the correct customer forwarding table from the customer lookup table
     using the physical interface and the tunnel identifier;
   determining via the customer forwarding table a physical interface and tunnel
     identifier associated with a network address of the transmission; and
   sending the transmission to the network address on the determined physical interface
     using the determined tunnel identifier.

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20.-32. (Cancelled)

33. (New)   A computer-readable medium containing a computer program product for providing private network services using private addresses in a location remote from private network users, wherein a host computer contains a plurality of virtual servers which support a private network address space and wherein the private network address spaces of two or more of the virtual servers overlap, the computer program product comprising:

        program instructions for storing a customer lookup table, the customer lookup table storing associations between physical interfaces and tunnel identifiers identifying tunnels for private networks and a plurality of customer forwarding tables;

        program instructions for storing a plurality of customer forwarding tables, the customer forwarding tables associating network addresses with physical interfaces and tunnel identifiers;

        program instructions for receiving, over a tunnel, a transmission on a physical interface, the transmission containing a tunnel identifier;

        program instructions for determining the correct customer forwarding table from the customer lookup table using the physical interface and the tunnel identifier;

        program instructions for determining via the customer forwarding table a physical interface and tunnel identifier associated with a network address of the transmission; and

        program instructions for sending the transmission to the network address on the determined physical interface using the determined tunnel identifier.